

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: **KahHing Ting, Yingleong Neo, Hwaliang Ng, Liphong Teo, Chinsoon Yoap and Chaihian Gaw**
Assignee: **SEAGATE TECHNOLOGY LLC**
Application No.: **10/758,643** Group Art: **2161**
Filed: **January 15, 2004** Examiner: **Brent S. Stace**
For: **METHOD AND APPARATUS FOR QUEYRING A COMPUTERIZED DATABASE**

Mail Stop Appeal Brief – Patents
Commissioner for Patents
P. O. Box 1450
Alexandria, Virginia 22313-1450

ATTENTION: Board of Patent Appeals and Interferences

Sir:

APPELLANT'S BRIEF

APPELLANT'S BRIEF (37 C.F.R. §41.37)

This APPELLANT'S BRIEF is in furtherance of the Notice of Appeal filed in this case on May 9, 2007. The fees required under § 41.20(b)(2) and any required petition for extension of time for filing this brief and fees therefor, are dealt with in the accompanying Transmittal of Brief.

This brief contains these items under the following headings, and in the order set forth below (37 C.F.R. §41.37(c)):

- I Real Party in Interest
- II Related Appeals and Interferences
- III Status of Claims
- IV Status of Amendments
- V Summary of Claimed Subject Matter

VI	Grounds of Rejection to be Reviewed on Appeal
VII	Argument
VIII	Claims Appendix
IX	Evidence Appendix
X	Related Proceedings Appendix

I. REAL PARTY IN INTEREST

The real party in interest in this case is: SEAGATE TECHNOLOGY LLC

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences that will directly affect, or be directly affected by, or have a bearing on the Board's decision in this Appeal.

III. STATUS OF CLAIMS

Claims 1-7, 9-18 and 20 are pending in the application. All claims stand rejected, and appeal is taken from the rejection of each of claims 1-7, 9-18, and 20. Claim 1 is an independent claim and claims 2, 3, 4, 5, 6, 7, 9, and 10 depend from claim 1. Claim 11 is an independent claim and claims 12, 13, 14, 15, 16, 17, 18, and 20 depend from claim 11. Claims 8 and 19 are cancelled.

No claims have been withdrawn from consideration but not canceled. No claims have been allowed. No claims are objected to. The claims on appeal are accordingly all pending claims 1-7, 9-18 and 20.

IV. STATUS OF AMENDMENTS

No post-final amendments were presented.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Independent claim 1 is generally directed to a method (such as the DATA QUERY routine 170, FIG. 5) for querying a computerized database (such as database 144, FIG. 6). See specification, p. 2, lines 20-24, generally; FIG. 5 and p. 7, line 15 to p. 9, line 3. The method generally features distributing a desired range of data values to be obtained from the database (step 172, FIG. 5) across a plurality of different query statements (step 174, FIG. 5) wherein the desired range is accessible using a single login account of a computer network (such as 154, FIG. 3; 184 and 186, FIG. 6) associated with the database (see p. 7, line 18 to page 8, line 8). The method further generally features simultaneously executing the plurality of query statements to access the database (step 176, FIG. 5) and transfer associated data subsets into a memory space (such as 189, FIG. 6) by logging into the computer network under a different login account for each query statement (such as LOGIN1, LOGIN2, LOGIN3 178, 180, 182 of FIG. 6; p.8, line 9 to p. 9, line 3). The method further generally features arranging the associated data subsets to form the desired range of data values (step 198, FIG. 5; page 10, lines 5-8).

Independent claim 11 is generally directed to a computer system (such as computer network 154, FIG. 3). See p. 3, lines 5-15; p. 11, line 1 to p. 12, line 4; and FIGS. 3 and 6. The computer system generally features a database (such as 144, FIG. 6) stored in a first memory space and accessible by a computer (such as 156, FIG. 3; 186, FIG. 6); and a query engine stored in a second memory space (such as engine 150 in FIG. 3) which, upon execution (DATA

QUERY routine 170, FIG. 5), distributes a desired range of data values to be obtained from the database across a plurality of different query statements (such as steps 172, 174 of FIG. 5; p. 7, line 18 to page 8, line 8), simultaneously executes the plurality of query statements (such as step 176 of FIG. 5; p. 8, lines 9-24) to access the database and transfer associated data subsets into a third memory space (such as 189, FIG. 6), and arranges the associated data subsets to form the desired range of data values (such as step 198, FIG. 5; p. 10, lines 5-8), wherein the query engine further initiates an auto-brake function (curves 190, 192 of FIG. 7; p. 9, lines 15-25) that limits input/output transfer elapsed time to a maximum value during said transfers of the associated data subsets into the third memory space so that said transfers of the associated data subsets are interrupted when the maximum value is reached (p. 9, lines 4-14).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. The first grounds of rejection presented for review on appeal is the final rejection of claims 1-7 and 9-10 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,857,180 to Hallmark et al. ("Hallmark '180") in view of U.S. Patent No. 6,701,345 to Carley et al. ("Carley '345").
2. The second grounds of rejection presented for review on appeal is the final rejection of claims 11-18 and 20 under 35 U.S.C. 103(a) as being unpatentable over Hallmark '180 in view of U.S. Patent Publication No. 2002/0062310 to Marmor et al. ("Marmor '310").

VII. ARGUMENT

It is initially noted that the rejections in the final Office Action are each based on 35 U.S.C. § 103. As the Board will appreciate, an obviousness rejection under §103 is properly evaluated by the Office in view of *Graham v. John Deere Co.*, 383 US 1 (1966).

Such analysis requires: (A) the claimed invention must be considered as a whole; (B) the references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination; (C) the references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention; and (D) reasonable expectation of success is the standard with which obviousness is determined. See MPEP 2141.

Moreover, all of the limitations of a rejected claim must *actually be taught or suggested by the cited references* in order to establish a *prima facie* case of obviousness. See MPEP 2143.

A. FIRST GROUNDS OF REJECTION – PATENTABILITY OF CLAIMS 1-7 AND 9-10

Independent claim 1 was finally rejected under §103(a) over U.S. Patent No. 5,875,180 to Hallmark et al. (“Hallmark ‘180) in view of U.S. Patent No. 6,701,345 to Carley et al. (“Carley ‘345”). This rejection is improper on the basis that the cited references fail to teach or suggest all of the claim limitations, as well as on the basis that the skilled artisan would not view it desirable to modify the references to arrive at the claimed subject matter.

THE CITED REFERENCES FAIL TO TEACH OR SUGGEST ALL THE CLAIM
LIMITATIONS OF CLAIM 1

Claim 1 generally features “simultaneously executing the plurality of query statements to access said database and transfer associated data subsets into a memory space by logging into the computer network under a different login account for each query statement.” This is not taught or suggested by either Hallmark ‘180 or Carley ‘345.

In the “Response to Arguments” section of the final Office Action, and as further asserted in the Advisory Action, the Examiner generally asserts that the single logon capability taught by Carley ‘345 results in the automatic activation of multiple IDs and passwords to access the system. See final Office Action, p. 2, line 17 to page 3, line 6. This characterization of Carley ‘345 is respectfully traversed.

While the Applicant generally agrees that Carley ‘345 teaches that it is possible, albeit difficult, to coordinate multiple IDs and passwords associated with a single logon ID, the Applicant submits that the single logon capability of Carley ‘345 eliminates the need to execute multiple IDs and passwords. Therefore, the single logon of Carley ‘345 does not result in the execution of multiple IDs and passwords, and indeed, Carley ‘345 directly teaches away from doing so.

In this regard, Carley ‘345 teaches as follows:

What are the benefits of single logon capabilities?

Due to the number of components, users may be required to have multiple ID(s) and passwords unless the system is designed to allow a user to access all of the required resources through a single logon. As most products on the market typically allow access to only a subset of resources, single logons with multiple ID and password coordination may be difficult

to achieve. Issues such as periodic required password changes can be difficult to overcome while maintaining adequate security. Carley '345, col. 130, lines 42-52.

The multiple IDs and passwords referenced by Carley '345 are described as being necessary when all of the resources cannot be accessed by a single logon ID. Carley '345, col. 130, lines 44-47. Carley '345 references the fact that "*most products on the market*" only permit "*access to only a subset of resources.*" In such cases, Carley '345 indicates that "*single logons with multiple ID and password coordination may be difficult to achieve.*" Col. 130, lines 47-52.

As a result, the system taught by Carley '345 provides a single logon capability ("One User-ID") that provides access to all resources under a single logon ID. That is, the single logon ID of Carley '345 provides "*access to all software*," serves as a "*central point for all security checking*," and uses a "*single user setup and sign-on capability across all platforms and applications*." Carley '345, col. 130, lines 58-60; col. 131, lines 5-6 (emphasis added).

The system of Carley '345 thus solves the logistical and security problems associated with "multiple IDs and passwords" by providing a single user logon that provides access to all system resources as that logon ID, and eliminates the need for multiple user IDs and passwords. It is therefore incorrect to assert that Carley '345 teaches or suggests to execute multiple user IDs and passwords as a result of a single logon in the manner claimed, when Carley '345 clearly teaches the exact opposite.

Reconsideration and withdrawal of the rejection of claim 1, and for the claims depending therefrom, are respectfully requested on this basis.

THE CITED REFERENCES DO NOT SUGGEST THE DESIRABILITY OF MAKING THE
CLAIMED COMBINATION

When considered as a whole, per *Graham*, neither Hallmark ‘180 or Carley ‘345, alone or in combination, suggest the desirability, and hence the obviousness, of combining/modifying the references to arrive at the claimed combination of claim 1.

In the Advisory Action dated April 25, 2007, the Examiner states:

Carley shows that it is beneficial to use single-login (using a single user-ID). However, Carley merely suggests that management of coordinating the multiple ID's so ID's and passwords associated with the single logon may be difficult. However, it is possible (as suggested in Carley). Advisory Action, p. 2., lines 5-7.

The assertion by the Examiner is that Carley ‘345 does not say it would be impossible to coordinate multiple logins, just that it would be difficult. This misses the point. The significance of this teaching by Carley ‘345 is that, when considered as a whole, Carley ‘345 directs the skilled artisan away from the claimed combination. “A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference or would be led in a direction divergent from the path that was taken by the applicant.” *In re Fulton*, 73 USPQ2d 1141, 1145 (Fed. Cir. 2004), citing *In re Gurley*, 27 F.3d 551, 554 (Fed. Cir. 1994) (emphasis added).

As the Examiner correctly notes, Carley ‘345 teaches that it is difficult to coordinate multiple ID’s and passwords associates with a single logon ID. Carley ‘345 solves this problem by teaching a single logon capability for all platforms and applications as recited above. Since Carley ‘345, col. 130, lines 47-52 discourages single logons with multiple ID and password coordination as being “difficult to achieve”, with issues relating thereto being “difficult to

overcome”, in favor of single logon capability for all resources, Carley ‘345 cannot be viewed as suggesting the desirability of “simultaneously executing the plurality of query statements to access said database and transfer associated data subsets into a memory space by logging into the computer network under a different login account for each query statement,” as claimed.

Rather, Carley ‘345 clearly suggests that such approach is not desirable, since it increases a number of risks and complexities, including maintaining system security. Carley ‘345, col. 130, lines 42-52.

Moreover, it is noted that the above reference to multiple user IDs and passwords by Carley ‘345 is in the context of the different IDs being necessary to access different subsets of resources. Carley ‘345 itself expressly teaches that the multiple user IDs and passwords are not used if a single logon ID can access all of the desired resources. See col. 130, lines 44-47.

Indeed, when different users logged into the system attempt to access the same resource, Carley ‘345 teaches to suspend one of the processes to prevent such concurrent access. See e.g., FIG. 4; col. 4, lines 48-60; and col. 14, lines 24-34.

Carley ‘345 thus explicitly teaches to prevent concurrent access of the same resource by multiple logon IDs. It is difficult to understand how the Examiner would believe this suggests the desirability of the claimed combination, when the system of Carley ‘345 would immediately suspend the operation of the claimed subject matter.

Accordingly, the rejection is improper on the basis that neither Hallmark ‘180 or Carley ‘345 suggest the desirability of, and indeed teach away from, the “*simultaneously executing*” step of claim 1. Reconsideration and withdrawal of the rejection of claim 1, and for the claims depending therefrom, are respectfully solicited on this basis.

Claim 1 further features “*distributing a desired range of data values to be obtained from the database across a plurality of different query statements, the desired range accessible using a single login account of a computer network associated with the database.*” A suggestion for the desirability of this affirmative step of claim 1, per *Graham*, is also not present in either reference.

As noted above, Carley ‘345 only teaches the use of multiple logins when all of the resources are accessible from the same account; multiple logins are only deemed necessary when the resources are not reachable by a single account. Carley ‘345, col. 130, lines 44-47. Carley ‘345 thus teaches away from this step as well.

For these reasons, there is further nothing in either reference that suggests the desirability of the “*distributing*” step of claim 1. Reconsideration and withdrawal of the rejection of claim 1, and for the claims depending therefrom, are respectfully requested on this basis as well.

B. SECOND GROUNDS FOR REVIEW ON APPEAL – REJECTION OF CLAIMS 11-18 AND 20

Independent claim 11 was rejected in the final Office Action under §103(a) over Hallmark ‘180 in view of U.S. Published Patent Application No. US2002/0062310 to Marmor et al. (“Marmor ‘310”).

This rejection is also respectfully traversed on that basis that the cited references fail to teach or suggest all of the claim limitations, as well as on the basis that the skilled artisan would not view it desirable to modify the references to arrive at the claimed subject matter.

THE CITED REFERENCES FAIL TO TEACH OR SUGGEST ALL THE CLAIM
LIMITATIONS OF CLAIM 11

Independent claim 11 generally features “*a query engine stored in a second memory space which, upon execution, distributes a desired range of data values to be obtained from the database across a plurality of different query statements, simultaneously executes the plurality of query statements to access the database and transfer associated data subsets into a third memory space, and arranges the associated data subsets to form the desired range of data values, wherein the query engine further initiates an auto-brake function that limits input/output transfer elapsed time to a maximum value during said transfers of the associated data subsets into the third memory space so that said transfers of the associated data subsets are interrupted when the maximum value is reached.*” This is not taught or suggested by either reference.

In the “Response to Arguments” section of the final Office Action, the Examiner states that the final rejection of claim 11 is being sustained by merely combining the time to live (TTL) feature of Marmor ‘310 with the queries of Hallmark ‘180. See final Office Action, p. 3, lines 15-21. The Applicant respectfully submits that the above combination is insufficient to provide teachings and suggestions for all the limitations of claim 11, as required to establish a *prima facie* rejection via obviousness. MPEP 2143.

Claim 11 explicitly requires that the recited “*auto-brake function*” is initiated “*during said transfers of the associated data subsets into the third memory space*” so that “*said transfers of the associated data subsets are interrupted*.” The Applicant respectfully submits that the Examiner is obliged to construe this claim in accordance with the actual claim language presented, which recites the auto-brake function as occurring “*during*” the transfer of the

associated data subsets “into” the third memory space.

Careful review of paragraphs [0030-0032] of Marmor ‘310, shows that what is under consideration in this reference is the transmission of a Query packet to initially locate specific content on various computers, not to actually transfer the content. For example, Marmor ‘310 states:

A Query packet might ask, “Do you have any content that matches the string “Homer”? This question is sent to all the computers that returned Pong packets to the originating computer. Each of these computers does two things. First, each computer checks to see if it has any content that matches the search string. In this case it looks to see if there are any files in a specified directory marked “sharable to the outside world” that have the letters “Homer” in their complete file path. Second, each computer sends the Query packet on to all the computers to which it is connected. These computers check their directories or indexes and send the Query packet to all their connected computers. This process continues until you run out of computers to ask or until the Query packet gets too old and times out.
Marmor ‘310, para. [0030], lines 5-18 (emphasis added)

The “timing out” feature of Marmor ‘310 thus relates to a maximum time interval during which a search can take place to locate source(s) for the desired content, thereby preventing the Query from bouncing around “for a very long time, potentially forever.” Marmor ‘310, para [0031], line 3.

Marmor ‘310 goes on to explain that the results of the Query packet search provide a listing of one or more locations (via QueryHit packet returns) from which the desired content can be manually downloaded by the user. Marmor ‘310, para [0032], lines 14-16; para [0033], lines 1-3. The user performs the download by sending a Push packet to the desired source which initiates the transfer. Marmor ‘310, para [0034].

The TTL feature of Marmor ‘310 is for lost queries that never reach the intended target.

See e.g., Marmor ‘310, para [0031]. Merely combining the TTL feature of Marmor ‘310 with the query features of Hallmark ‘180 would not result in the recited “*auto-brake function*,” since the contribution from Marmor ‘310 in this scenario occurs prior to, not “during” the data transfer “into” the memory space as claimed. See Marmor ‘310, paras [0032]-[0034].

As neither Hallmark ‘180 or Marmor ‘310 actually teach or suggest all of the limitations of independent claim 11, reconsideration and withdrawal of the rejection of claim 11, and for the claims depending therefrom, are respectfully requested.

THE CITED REFERENCES DO NOT SUGGEST THE DESIRABILITY OF MAKING
THE CLAIMED COMBINATION

Furthermore, neither Hallmark ‘180 or Marmor ‘310 suggest the desirability, and hence the obviousness, of combining/modifying the references to arrive at the claimed combination of claim 11, as required to establish a *prima facie* case of obviousness. *Graham, Supra*; MPEP 2141.

As noted above, when Marmor ‘310 is considered as a whole (per *Graham*), the TTL feature of Marmor ‘310 tracks lost queries that never actually reach the intended target. Marmor ‘310, para [0031]. The skilled artisan would clearly view a query that never reaches its target as failing to initiate the intended data transfer. That is, the skilled artisan would understand that a query that fails to reach its target is aborted and the associated data transfer does not take place.

The systems taught by Hallmark ‘180 and Marmor ‘310 therefore cannot be reasonably viewed as suggesting the desirability of modifying/combining the respective references to arrive at the recited “*auto-brake function*” that is initiated “during said transfers of the associated data”

subsets into the third memory space” so that “said transfers of the associated data subsets are interrupted,” as claimed by claim 11. There is nothing to suggest such desirability apart from impermissible hindsight reconstruction of the claim based on an improper characterization of the respective references. *Graham, Supra*; MPEP 2143.

Accordingly, reconsideration and withdrawal of the rejection of claim 11, and for the claims depending therefrom, are respectfully requested on this basis as well.

C. CONCLUSION

For the reasons advanced above, the Applicant respectfully submits that all pending claims 1-7, 9-18 and 20 stand patentable over the cited references.

Claims 1-7 and 9-10 are believed to be patentable over Hallmark ‘180 and Carley ‘345 on the basis that these references fail to teach or suggest all of the limitations of independent claim 1, as well as on the basis that there is nothing that would suggest the desirability of modifying/combining these references to arrive at the subject matter of claim 1. Indeed, at least Carley ‘345 teaches directly away from the claimed subject matter, and would appear to explicitly operate to suspend attempted operation of a system in accordance with the subject matter of claim 1.

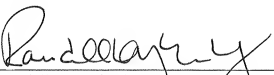
Similarly, Claims 11-18 and 20 are believed to be patentable over Hallmark ‘180 and Marmor ‘310 on the basis that these references fail to teach or suggest all of the limitations of independent claim 11, as well as on the basis that there is nothing that would suggest the desirability of modifying/combining these references to arrive at the subject matter of claim 11.

Indeed, there is nothing at least in Marmor '310 that even recognizes the problem solved by the claimed combination of claim 11.

Accordingly, the Applicant respectfully requests that the Board reverse the final rejection and pass all pending claims 1-7, 9-18 and 20 to allowance.

Respectfully submitted,

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VIII. CLAIMS APPENDIX

1. (Previously presented) A method for querying a computerized database, comprising:
distributing a desired range of data values to be obtained from the database across a
plurality of different query statements, the desired range accessible using a single
login account of a computer network associated with the database;
simultaneously executing the plurality of query statements to access said database and
transfer associated data subsets into a memory space by logging into the computer
network under a different login account for each query statement; and
arranging the associated data subsets to form the desired range of data values.
2. (Original) The method of claim 1, wherein the computerized database comprises a
distributed database portions of which are stored in different locations linked by a computer
network.
3. (Original) The method of claim 1, further comprising exporting the desired range of
data values obtained from the arranging step to a second memory space.
4. (Original) The method of claim 1, further comprising using an analysis routine to
analyze the desired range of data values.
5. (Original) The method of claim 1, wherein at least one query statement retrieves data

values from the database for a selected data field type, and wherein at least one other query statement retrieves data values from the data base for the selected data field type.

6. (Original) The method of claim 1, wherein the desired range of data values comprises manufacturing data associated with manufacture of a population of products.

7. (Original) The method of claim 6, wherein the products comprise data storage devices.

Claim 8 (Cancelled).

9. (Previously presented) The method of claim 1, wherein the simultaneously executing step further comprises initiating an auto-brake function that limits input/output transfer elapsed time by a server associated with the computer network and the database to a maximum value during execution of a selected one of the plurality of query statements.

10. (Original) The method of claim 1, wherein the distributing, simultaneously executing and arranging steps are carried out on a repetitive, daily basis to obtain data relating to an ongoing manufacturing process.

11. (Previously presented) A computer system, comprising:
a database stored in a first memory space and accessible by a computer; and
a query engine stored in a second memory space which, upon execution, distributes a

desired range of data values to be obtained from the database across a plurality of different query statements, simultaneously executes the plurality of query statements to access the database and transfer associated data subsets into a third memory space, and arranges the associated data subsets to form the desired range of data values, wherein the query engine further initiates an auto-brake function that limits input/output transfer elapsed time to a maximum value during said transfers of the associated data subsets into the third memory space so that said transfers of the associated data subsets are interrupted when the maximum value is reached.

12. (Original) The computer system of claim 11, wherein the computer comprises a server computer, wherein the computer system further comprises a client computer associated with the server computer over a computer network, and wherein the client computer executes the query engine.

13. (Previously presented) The computer system of claim 11, wherein the database comprises a distributed database so that the first memory space comprises a plurality of different locations linked by a computer network.

14. (Original) The computer system of claim 11, wherein the query engine subsequently exports the desired range of data values to a fourth memory space.

15. (Original) The computer system of claim 11, further comprising an analysis routine which analyzes the desired range of data values.

16. (Original) The computer system of claim 11, wherein the desired range of data values comprises manufacturing data associated with manufacture of a population of products.

17. (Original) The computer system of claim 16, wherein the products comprise data storage devices.

18. (Original) The computer system of claim 11, wherein the simultaneously executing step comprises logging into a computer network associated with the database under a different login account for each query statement so that each query statement is simultaneously executed using the associated login account.

Claim 19 (Cancelled).

20. (Previously presented) The computer system of claim 11, wherein the query engine extracts the desired range of data values on a repetitive, daily basis to obtain data relating to an ongoing manufacturing process.

IX. EVIDENCE APPENDIX

No additional evidence is included.

X. RELATED PROCEEDINGS APPENDIX

There exist no relevant related proceedings concerning this Appeal before the Board.